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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,876	07/21/2003	Thomas Harold Cavanaugh	BIW-TOM1	7630

7590

06/03/2004

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EXAMINER

GILMAN, ALEXANDER

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/623,876	CAVANAUGH, THOMAS HAROLD	
	Examiner	Art Unit	
	Alexander D Gilman	2833	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 18-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-17, drawn to electrical connector, classified in class 439, subclass 589.
- II. Claims 18-23, drawn to method of attaching the connector to the cable, classified in class 29.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case omission of the component can be determined not just by comparison of the respective epoxy volumes, but other way, for example, by visual observation.

During a telephone conversation with Rinne Risto on 05/17/2004 a provisional election was made without traverse to prosecute the invention of group I, claims 1-17. Affirmation of this election must be made by applicant in replying to this Office action.

Claims 18-23 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 1 recites "means for connecting a plurality of electrical conductors", "means adapted for connecting to a stationary electrical connector", "means for providing an electrical continuity", "means for mechanically securing said cable to said connector".

According to the specification, each of structures for connecting a plurality of electrical conductors, for connecting to a stationary electrical connector, for providing an electrical continuity, comprises not one component but a several elements. Since the specification does use term "means" and hence not specify which components are included in the respective terms "means", it is unclear how the terms "means" should be interpreted. For example, it is unclear if "means for mechanically securing said cable to said connector" include "retaining nut" and "backshell" or they also include "a pair of split armor grips".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Colescott et al.

With regard to claim 1, Colescott et al (US 5,458,507) disclose a field-attachable, disconnectable electrical connector comprising:

(a) a housing (20, 34), said housing including a first end and an opposite second end, said first end including means (72) for connecting a plurality of electrical conductors (73) thereto and said second end including means (48, 50) adapted for connecting to a stationary electrical connector , and

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including means (64) for providing an electrical continuity from said means for connecting a plurality of electrical conductors to said means adapted for connecting to a stationary electrical connector;

(b) means (150) for providing an environmental seal intermediate said cable and said connector; and

(c) means(144,138) for mechanically securing said cable to said connector.

With regard to claim 2, Colescott et al disclose that said means for providing an electrical continuity from said means for connecting a plurality of electrical conductors to said means adapted for connecting to a stationary electrical connector includes a plurality of power pins (64) disposed in said housing, and wherein each of said plurality of power pins is connected electrically at a first end to a portion of said means (72) for connecting a plurality of electrical conductors thereto and wherein each of said plurality of power pins is connected electrically at a second end to a portion (48) of said means adapted for connecting to a stationary electrical connector.

With regard to claim 3, Colescott et al disclose that an insulation (100) is provided intermediate each of said power pins and a casing of said housing.

With regard to claim 4, Colescott et al disclose that said housing includes a ring (34) that is attached to an interior of said housing and wherein an opposite end of said ring is attached to a coupling nut (62), and wherein said coupling nut is adapted to rotate about a center longitudinal axis and wherein said coupling nut includes threads adapted to cooperate with said stationary electrical connector.

With regard to claim 5, Colescott et al disclose means (28, 58) for sealing said ring with respect to said casing of said housing and said coupling nut with respect to said ring.

With regard to claim 11, Colescott et al disclose that means for mechanically securing said cable to said connector includes a retaining nut (144) that is adapted to cooperate with portion (26) of said housing sufficient to urge an armor grip to engage a predetermined amount with an armor cladding of said cable.

Claims 1, 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Vetter et al.

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With regard to claims 1, 15 Vetter et al (US 3,675,184) disclose a field-attachable, disconnectable electrical connector comprising:

(a) a housing (24), said housing including a first end and an opposite second end, said first end including means (72) for connecting a plurality of electrical conductors (73) thereto and said second end including means (retaining ring, no number) adapted for connecting to a stationary electrical connector , and

including means (18) for providing an electrical continuity from said means for connecting a plurality of electrical conductors to said means adapted for connecting to a stationary electrical connector;

(b) means (102) for providing an environmental seal intermediate said cable and said connector;

and

(c) means(70) for mechanically securing said cable to said connector.

With regard to claims 16,17 Vetter et al disclose that said housing includes a radius of ninety degrees of arc..

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colescott et al in view of Gray or Jackson et al.

Colescott et al disclose all of the limitations except for a power contact pin that is crimped onto each said plurality of electrical conductors of said cable

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Gray et al (US 6,142,805) and Jackson et al (US 6,142,805) disclose a power contact pin (Gray, Fig. 4; Jackson, r.n. 18) that is crimped onto each said plurality of electrical conductors of said cable.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Colescott et al with the contact pin, as taught by Gray et al or Jackson et al, to make the connection non-permanent for possible replacement.

Claims 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colescott et al in view of Inaba et al

Colescott et al disclose all of the limitations except for a plurality of locking flanges that are disposed circumferentially around a body of each power contact pin

Inaba et al (US 5,653,615) disclose (Fig. 1) a plurality of locking flanges (7).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Colescott et al with a plurality of locking flanges, as taught by Inaba et al, to ensure the dependable pin-socket connection.

Claims 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colescott et al in view of Dewdney

Colescott et al disclose all of the limitations including a sealing grommet (122) that is disposed oversaid plurality of conductors and adjacent to said first end of said housing, backshell (130), epoxy (150) but do not disclose a ground wire

Dewdney (US 6,485,335) discloses a ground wire (26).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Colescott et al with a ground wire, as taught by Dewdney, to ground the cable to the housing .

Claims 12, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colescott et al in view of Scannelli et al

With regard to claim 12, Colescott et al disclose all of the limitations except for a pair of split armor grips with a first taper at a first end thereof and a second taper at a second end thereof,

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wherein the first taper is urged into contact with a corresponding inner first taper of said backshell and said second taper is

urged into contact with a corresponding inner second taper of said retaining nut.

Scannelli et al (US 5,267,877) disclose (Fig. 1) a pair of split armor grips (14) with a first taper (43) at a first end thereof and a second taper (45) at a second end thereof, wherein the first taper is urged into contact with a corresponding inner first taper of said backshell and said second taper is urged into contact with a corresponding inner second taper of said retaining nut.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Colescott et al with a taper structures, as taught by Scannelli et al, to ensure the dependable cable attachment to the connector.

With regard to claim 13, Colescott et al when modified by Scannelli et al disclose all of the limitations as applied to claim 12 , plus (Colescott et al) that said retaining nut includes an epoxy (143)

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colescott et al in view of Scannelli et al as applied to claim 13 above, and further in view of Ellis et al.

Colescott et al when modified by Scannelli et al disclose all of the limitations except for shrink tubing disposed over a portion of said electrical connector and over a portion of said cable.

Ellis et al (US 5,439,386) disclose shrink tubing (190) disposed over a portion of said electrical connector and over a portion of said cable.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Colescott et al with a taper structures, as taught by Scannelli et al, to dependably seal cable to the connector.

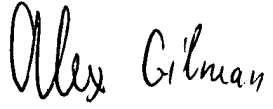
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander D Gilman whose telephone number is 571 272-2004. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571 272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

05/24/2004


ALEXANDER GILMAN
PRIMARY EXAMINER